AMENDMENTS TO THE CLAIMS

1. (Currently amended). A method of measuring a stability of a plating bath, said method comprising:

providing a plating bath ~~having a known~~ determining a voiding threshold concentration of a void-formation marker for said bath;

plating a metal using said bath;

obtaining a bath liquor, possibly containing a void-formation marker (VFM) from said bath;

determining a concentration of said void-formation marker; and

maintaining said VFM concentration below said threshold concentration.

2. (Original). The method of measuring a stability of a plating bath, according to claim 1, wherein determining a concentration of said void-formation marker comprises:

separating said void-formation marker from said plating bath liquor; and

quantifying said void-formation marker.

3. (Original). The method of measuring a stability of a plating bath, according to claim 2, wherein said void-formation-marker is separated chromatographically.

4. (Original). The method of measuring a stability of a plating bath, according to claim 3, wherein said void-formation-marker is separated by liquid chromatography.

5. (Original). The method of measuring a stability of a plating bath, according to claim 3, wherein said void-formation-marker is separated by high performance liquid chromatography (HPLC).

6. (Original). The method of measuring a stability of a plating bath, according to claim 3, wherein said chromatography comprises ion-pairing, reversed-phase chromatography.

7. (Original). The method of measuring a stability of a plating bath, according to claim 2, wherein said quantifying is performed by instrumental analytical methods selected from the group consisting of spectroscopy and electrochemical detection.

8. (Original). The method of measuring a stability of a plating bath, according to claim 7, wherein said spectroscopy comprises techniques selected from the group consisting of ultraviolet, visible, infrared, and mass spectroscopy.

9. (Original). The method of measuring a stability of a plating bath, according to claim 2, wherein said quantitation is provided by instrumentation that provides a quantitative output in proportion to a concentration of said void-formation marker.

10. (Original). A method of measuring a plating bath breakdown threshold value, T, said method comprising:

plating at least one metal on a substrate;

determining a plurality of time-points;

determining a VFM ratio for each of said time-points;

counting, for each of said time-points, a number of voids in the metal plated on said substrate;

determining said threshold value as the largest VFM ratio at which no voids are observed.

11. (Original). A method of measuring a plating bath breakdown threshold value, according to claim 10, wherein said VFM ratio is the said concentration of said void-formation marker divided by a concentration of an accelerator.

12. (Original). A method of maintaining a plating bath under non-voiding conditions, the method comprising the steps of:

determining a bath threshold value, T;

determining a C_{VFM}; and

performing a bleed and feed to maintain said C_{VFM} below the value of said threshold.

13. (Original). A method of maintaining a plating bath under non-voiding conditions, according to claim 12, wherein said bleed and feed comprises the steps of:

adding a volume of fresh bath liquor to bring the volume to a fractional volume above a nominal bath volume; and

removing said fractional volume;

14. (Original). A method of maintaining a plating bath under non-voiding conditions, according to claim 13, wherein said fractional volume is from about 1% to about 10%.